

App. No. 09/982,110
Amendment dated November 17, 2003
Response to Office action date July 16, 2003
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REMARKS

Applicants respond as follows to the July 16, 2003 Office action. Applicants thank the Examiner for the indication of allowable subject matter in claims 6, 8, 9, 17-19, 28-32, and 34-37. Claims objected to as being dependent on non-allowable claims are rewritten into independent form.

Claims 18, 19, and 35 stand objected to for various informalities. Claims 18 and 19 are cancelled. Claim 35 is amended to correct the informalities.

Claims 1, 2, 5, 7, 18, and 23-27 stand rejected under 35 USC 102(b) as anticipated by US Pat. No. 5,324,950 to Otaka et al. Claims 1, 2, 5, 18, and 23-26 are cancelled. Claim 7 is rewritten to incorporate a limitation similar to that of allowable claim 35 and to be in independent form. Applicants submit that amended claim 7 and its dependents are now allowable. Applicant submits that claim 27 should be allowable because it includes a limitation similar to that which made claim 35 allowable. Claim 27 is rewritten into independent form.

Claims 12-16, 19, 20, 22, and 33 stand rejected under 35 USC 103(a) as unpatentable over Otaka et al. in view of U.S. Pat. No. 5,196,70 to Gesley. Claims 12-16, 19, 20, 22, and 33 are cancelled.

Claims 3, 4, 10, 11, and 21 stand rejected over Otaka et al. in view of applicants' admitted prior art. Claims 3, 4, 10, and 21 are cancelled. Claim 11 is amended to depend from allowable claim 32. Applicants wish to clarify what is admitted prior art. The admitted prior art does not include a system in which the mechanism that provides drives the apertures, and not just the apertures themselves, are within the vacuum chamber. It is applicants understanding the claim 32 is allowable because it states more clearly than claim 10 that the drive mechanism, and not just the apertures themselves, are inside the vacuum.

Applicants submit that the admitted prior art does not include an in-vacuum aperture changing mechanism. In the description of the prior art in applicants' specification page 2, paragraph 1005, states: "The mechanism for moving the aperture strip typically extends outside

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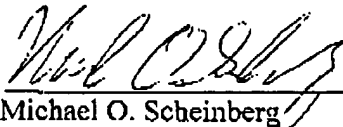
of the system vacuum chamber." The specification describes as prior art an aperture changing mechanism outside the vacuum chamber, not an in-vacuum aperture mechanism. In describing the prior art system of FIG. 1, applicants state in paragraph 1007: "FIG. 1 also shows mechanical feedthroughs for driving the automatic variable aperture . . ." As described in paragraph 1023, one advantage of the in-vacuum aperture mechanism is that it permits a shorter column design, which can increase resolution.

In rewriting claims 27 and 29 into independent form, obvious errors were corrected. The preambles of claims 27 and 29 incorrectly said "The method of" the respective parent claim, but the parent claims were apparatus claims and claims 27 and 29 recited structure. Also in claims 27 and 29, "for producing a focused ion beam column" was changed to "including a focused ion beam column." In rewriting claims 27, 29, and 32 into independent form, the "dielectric bushing" element, which the examiner determined did not make the parent claims patentable, was left out. Also, references to multiple beams in claims 27 and claim 29 were removed.

Applicants submit that all claims remaining in the application are allowable and respectfully requests the application be allowed.

Respectfully submitted,

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